Avian influenza and Wisconsin agriculture: Fast Facts

Wisconsin Department of Agriculture, Trade and Consumer Protection ■ Division of Animal Health

Avian influenza

- General term for many different strains of influenza virus that infect birds, sometimes making them sick, and may sometimes infect other species too
- Often called “bird flu”
- There are “low pathogenic” and “high pathogenic” strains, usually shortened to low-path and high-path, which refers to how sick they make birds. Low-path strains affect only the intestines; high-path strains may infect any organ of the bird’s body.
- Strain in the news is high-path H5N1, a particularly virulent strain for which there is no treatment
- Symptoms in birds include sudden death of multiple birds, decline in egg production or soft misshapen eggs, cold-like symptoms, green diarrhea, swelling, discoloration, neuro-muscular symptoms, lethargy, poor appetite
- “H” and “N” refer to proteins that make up the virus; different combinations of these proteins make different strains
- There are many strains of influenza that are not avian influenza; low-path and high-path refer only to avian influenza
- Waterfowl are often the “reservoir” where the virus circulates between outbreaks

Transmission

- A sick animal “sheds” the virus in manure or in droplets exhaled
- Other birds or humans in close contact with sick birds may contract the virus this way
- Appears to pass much more easily to birds than to humans
- Contaminated manure may also be spread from farm to farm on clothing and shoes, tires, or equipment

Pandemics

- A pandemic occurs when a contagious illness strikes humans around the world, not just in localized spots
- Influenza viruses frequently change by genetic mutation or by re-sorting their proteins
- High-path H5N1 virus now passes from bird to bird easily, from bird to human with difficulty, and apparently not from human to human
- Fear is that it could mutate to a strain that passes from human to human
- Could then spread rapidly and create a pandemic

H5N1 and agriculture

- High-path H5N1, and other strains of avian influenza, can occur in domestic poultry such as turkeys and chickens, and in farm-raised game birds such as pheasants and waterfowl
- Division of Animal Health has the legal authority and responsibility to control animal disease on farms, working with other local, state and federal agencies

Occurrence

- High-path H5N1 hasn't been found anywhere outside of Asia, Europe and Africa
- Expect to find it in wild waterfowl in the United States when testing begins among those birds this spring
- Finding it in waterfowl does not mean it will strike domestic poultry or humans, or that a pandemic has started
- Wisconsin has not had any strain of avian influenza since 1968, when we found a strain of low-path avian influenza in a commercial chicken flock
- Fairly common to find low-path strains in the U.S. in domestic poultry and wild waterfowl

Economics

- 11,000 registered premises with poultry in Wisconsin
- 1,300 registered premises with game birds
- Produced 110 million dozen eggs in 2005, worth $56.7 million
- Produced 33.8 million broilers in 2004, worth $68.5 million (2005 figure not yet available)
- Produce about 6 million turkeys a year
- Exported poultry and poultry products worth $3.2 million in 2005
- Consistently rank #19-20 among states for poultry and egg production

Surveillance

- Large commercial poultry producers are testing prior to sending birds to slaughter.
- Wild waterfowl are being tested by the Wisconsin Department of Natural Resources working with the U.S. Fish and Wildlife Service
- DATCP has applied for USDA funding to test at swap meets and on upland game bird farms

Response plans

- If found in wild waterfowl, wildlife officials would decide what action to take. If there were poultry farms nearby, we would do additional surveillance on those farms.
- If found on a farm, we would quarantine the flocks so no poultry or poultry products moved off the farm; restrict access to the farm by non-essential vehicles and people; and destroy the flock.
- Private practice veterinarians are legally required to immediately report suspect cases to us or to the U.S. Department of Agriculture.
- A state or federal foreign animal disease diagnostician would be at the farm the same day, taking blood samples and swabs from the birds. Specimens would likely be hand-carried to the Wisconsin Veterinary Diagnostic Laboratory in Barren or Madison. These tests can tell whether the organism is avian influenza, and what "H" protein it is, but not what "N" protein or whether it is low- or high-path. This testing takes up to 24 hours.
- Positive specimens would go to the National Veterinary Services Laboratories in Ames, Iowa, for confirmation and to finish determining the strain – the N protein and the pathogenicity. This takes 3-4 days.

Poultry and swap meets

- We are in the process of tightening enforcement of regulations that govern them. We have always considered them to fall under the same animal health regulations as fairs and exhibitions, but are now writing that into our rules explicitly. This means better record-keeping will be necessary, so we'll be able to trace animals more efficiently in case of outbreaks.

- We're also using swap meets as a place to reach small-poultry producers and hobbyists with biosecurity information.
- There is no reason to ban poultry from swap meets as long as there's no immediate disease risk.
- It is safe to go to swap meets, but as always, you should be careful in handling animals, not eat or drink in areas where animals are present, and be sure to wash your hands (and your children's hands) thoroughly with soap and water after handling or touching animals.

Poultry and fairs

- No reason to ban poultry as long as there's no immediate disease risk.
- Fairs must have veterinarians inspect livestock daily. This is not a new rule.
- Fairs are a good way of educating young people about biosecurity.
- It's safe to visit the poultry exhibits and barns at fairs, but respect the need for biosecurity – don't handle or touch the birds, and use shoe washing stations if provided.
- Put away toys, bottles, pacifiers, or other items children might put in their mouths before entering livestock barns or exhibit areas.
- Wash hands thoroughly with soap and water after leaving any livestock barn or exhibit.

Poultry and petting zoos

- No reason to ban poultry from petting zoos as long as there is no immediate disease risk.
- Organizers need to be careful about the risk of infections from salmonella, listeria and E. coli – and the same measures would help protect against the avian influenza virus if it were present.
  - Put away toys, pacifiers, bottles, sippy cups or anything else that children put into their mouths before entering the animal area.
  - Don't let children kiss the animals.
  - Wash children's hands thoroughly with soap and water immediately after leaving the animal area.
  - Don't eat near the animal area.

Poultry at the neighbor's

- Handling infected birds and/or coming in contact with manure are the risk factors.
- The virus isn't easily transmitted through the air
- The virus appears difficult to pass to humans even in close contact.

Pets

- Even if high-path H5N1 were found near your home or anywhere in Wisconsin, pet birds kept indoors are low risk.
- Infection in cats and dogs has been extremely rare
- If the virus were to be found in your area, keep cats indoors, on a leash, or at least away from any areas where waterfowl gather.
- Infected cats have shown severe symptoms such as fever, panting, difficulty walking, and convulsions to few or no symptoms. If you see symptoms, or suspect exposure to high-path H5N1, contact your veterinarian. Call before taking the cat to the clinic.
- Although dogs may become infected, they seem even less susceptible than cats.
- If a dog or cat brings dead birds to you, wear rubber gloves to pick up the birds and seal it in a plastic bag. Contact the Department of Natural Resources for further instructions.

Food safety

- Human cases of high-path H5N1 infection haven't been linked to eating contaminated meat or eggs
- Cooking chicken or turkey to 165 degrees F. would destroy the virus, as well as bacteria that can cause common food-borne illnesses
- Use a separate cutting board for poultry, and clean and disinfect after use.
- Wash hands thoroughly after handling raw poultry, before handling any other food.
- Hens with high-path H5N1 normally stop laying, or lay soft/misshapen eggs, so it's unlikely that infected eggs would get into the food supply even if the virus existed here.
- .Eggs produced commercially are sanitized
- Cook eggs until both the white and the yolk are solid